

REMARKS

Upon entering the above claims, claims 23-38 will be pending in this application and are presented for examination. Claims 1-22 stand rejected. Claims 1-22 are now canceled by Applicants without forfeiting any right to pursue canceled subject matter in a subsequent divisional or continuation application. New claims 23-38 have been added.

Reconsideration of the application is respectfully requested in view of the above claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

New claims 23-38 are substantially the same as original claims 1-22. Support for new claims 23-38 can be found throughout the specification.

Original Claim	1	2	8	9-20	22
New Claim	23	24	25	26-37	38

New radicals X¹, X² and X³ find support in canceled claim 1, wherein radical D can be substituted by X, and the ring atoms Q are each independently substituted by X.

Applicants believe no new matter is present in this or any other portion of the present amendment.

I. Defective Oath/Declaration

Applicants thank the Examiner for noting the apparent error on the Declaration. Applicants respectfully note, however, that the error is on the original Filing Receipt, which has now been corrected.

II. Improper Markush Group Rejection

The Examiner has rejected claims 1-22 of the present invention under the judicially created doctrine as being drawn to an improper Markush group, alleging that the

claims lack unity of invention. To the extent the rejection is applicable to the new set of claims, Applicants respectfully traverse the rejection.

Applicants note that the scope of new claim 23 encompasses only that subject matter that was searched by the Examiner: A=thienyl, W=phenylene and D=1-oxo-2-isoquinoliny], all of Formula I. The Examiner indicated that "[l]imiting the claims to the searched group...would overcome this rejection." Accordingly, Applicants respectfully submit that the rejection has been rendered moot.

III. Rejections under 35 U.S.C. § 112, 2nd paragraph

The Examiner has rejected claims 1-22 of the present invention under 35 U.S.C. § 112, 2nd paragraph, alleging that the terms "heteroaryl", "heterocyclic", "substituted", "prodrug" and "cardiovascular disease" are indefinite. The Examiner cites *In re Van Geuns* (988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)) in support of the allegation that the instant claims do not adequately define the instant invention. *In re Van Geuns* sets forth that critical limitations from the specification are not read into the claims. Applicants respectfully submit, however, that in regards to the objected to terms, the specification is not providing critical limitations, but rather is defining in a clear and concise manner, the terms that are being used in the claims of the present invention. To the extent the rejection is applicable to the new set of claims, Applicants respectfully traverse the rejection.

1. "heterocyclic"

The Examiner alleges that "it is not known how many atoms make up the ring, which atoms are present and what kind of a ring (monocyclic, bicyclic, spiro, fused, bridged, saturated, etc.) is intended." Applicants respectfully point the Examiner's attention to page 10, line 32 to page 11, line 30, where a complete definition of "heterocyclic" is provided. Of particular interest is page 11, lines 1-10 where the number of rings and types of rings are delineated:

a substituted or unsubstituted member selected from the group consisting of a stable **monocyclic ring having from 5-7 members** in the ring itself and having from 1 to 4 hetero ring atoms selected from the group consisting of N, O and S; a stable **bicyclic ring structure having a total of from 7 to 12** atoms in the two

rings wherein at least one of the two rings has from 1 to 4 hetero atoms selected from N, O and S, including bicyclic ring structures wherein any of the described stable monocyclic heterocyclic rings is fused to a hexane or benzene ring; and a stable **tricyclic heterocyclic ring structure having a total of from 10 to 16 atoms** in the three rings wherein at least one of the three rings has from 1 to 4 hetero atoms selected from the group consisting of N, O and S. (emphasis added)

In addition, examples of heterocyclic ring systems that are particularly useful in the present invention are set forth at page 11, line 31 to page 12, line 19. Provided with the description of heterocyclic ring system in the specification, Applicants submit that one of skill in the art would appreciate the heterocyclic ring structures that are encompassed by the present invention.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

2. "heteroaryl"

The Examiner alleges that "it is not known how many atoms are present, how many and what kind of heteroatoms are involved, what size ring is intended and how many rings are present." Applicants respectfully point the Examiner to the definition of heteroaryl in the specification at page 12, lines 20-24:

As used herein the term "aromatic heterocyclic ring system" has essentially the same definition as for the monocyclic and bicyclic ring systems except that at least one ring of the ring system is an aromatic heterocyclic ring or the bicyclic ring has an aromatic or non-aromatic heterocyclic ring fused to an aromatic carbocyclic ring structure.

Further support is found at page 11, lines 11-14:

Unless indicated otherwise the terms "heterocyclic ring" or "heterocyclic ring system" include aromatic rings, as well as non-aromatic rings which can be saturated, partially saturated or fully saturated non-aromatic rings.

Even more support is found at page 10, lines 15-20:

The term "aryl" which is included with the term "carbocyclic ring structure" refers to an unsubstituted or substituted aromatic ring...including but not limited to carbocyclic aryl, heterocyclic aryl, and biaryl groups and the like

Provided with the description of heteroaryl in the specification, Applicants submit that one of skill in the art would appreciate the heteroaryl structures that are encompassed by the present invention. Accordingly, Applicants respectfully request that the rejection be withdrawn.

3. "substituted"

The Examiner alleges that "one skilled in the art cannot say which substituents are permitted and which ones are not." Applicants respectfully note that the specification provides a complete description of the term "substituted", in relation to carbocyclic ring structures, at page 10, lines 10-14:

The term "substituted" as used in conjunction with carbocyclic ring structures means that hydrogen atoms attached to the ring carbon atoms of ring structures described herein may be substituted by one or more of the substituents indicated for that structure if such substitution(s) would result in a stable compound.

While "heterocyclic ring structure" is included in the definition of "carbocyclic ring structure", a specific definition of "substituted" in relation to "heterocyclic ring structures" is provided at page 11, lines 22-25:

Further, the term "substituted" means that one or more of the hydrogen atoms on the ring carbon atom(s) or nitrogen atom(s) of the each of the rings in the ring structures described herein may be replaced by one or more of the indicated substituents if such replacement(s) would result in a stable compound.

Furthermore, a list of preferred substituents is provided at page 10, lines 16-20:

one, two or three substituents selected from lower alkoxy, lower alkyl, lower alkylamino, hydroxy, halogen, cyano, hydroxyl, mercapto, nitro, thioalkoxy, carboxaldehyde, carboxyl, carboalkoxy and carboxamide.

Applicants submit that provided with the descriptions above, one of skill in the art would appreciate what is meant by and encompassed by the term "substituted". Accordingly, Applicants respectfully request that the rejection be withdrawn.

4. "prodrug"

The Examiner alleges that "'prodrug' is indefinite because one cannot say what this prodrug looks like." Applicants respectfully note that the description provides a complete description of "prodrug" at page 157, lines 3-22. Of particular interest is lines 17-21:

Prodrugs commonly known in the art include **acid derivatives** well known to practitioners of the art, such as, for example, **esters** prepared by reaction of the parent acids with a suitable alcohol, or **amides** prepared by reaction of the parent acid compound with an amine, or basic groups reacted to form an acylated base derivative. (emphasis added)

Applicants submit that provided with the descriptions above, one of skill in the art would appreciate the structures of prodrugs encompassed by the claims of the present invention. Accordingly, Applicants respectfully request that the rejection be withdrawn.

5. “cardiovascular disease”

Applicants respectfully note that new claims 23-38 do not use the term “cardiovascular disease”. Accordingly, Applicants respectfully submit that the rejection is moot.

IV. No Duplicate Claims Exist under 37 CFR § 1.75

The Examiner has advised that should claims 9 and 14 be found allowable, claims 10-13 and 15-18, respectively, will be objected to under 37 CFR § 1.75, as allegedly being a substantial duplicate thereof. While claims 1-22 have been canceled, Applicants note that new claim 26 reads as follows:

A pharmaceutical composition for treating thrombosis in a mammal comprising a therapeutically effective amount of a compound according to claim 23, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

Claims 31 and 36 are of a similar nature. 37 CFR § 1.75(c) recites:

One or more claims may be presented in dependent form, referring back to and **further limiting** another claim or claims in the same application. (emphasis added)

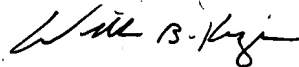
Applicants submit that claims 27-30, 32-35 and 37-38 are simply further limiting the claims from which they depend. As this is permitted under 37 CFR § 1.75(c), Applicants respectfully submit that there is no objection to be found.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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